

Claims

1           1. A conductive polymer matrix comprising a molecule having binding specificity for  
2 a target molecule.

1           2. The conductive polymer matrix according to claim 1, wherein said molecule having  
2 binding specificity for a target molecule is an antibody, or an antigen binding fragment  
3 thereof.

1           3. The conductive polymer matrix according to claim 2, wherein said antibody is a  
2 monoclonal antibody.

1           4. The conductive polymer matrix according to claim 2, wherein said antibody binds  
2 to a CD34 determinant.

1           5. The conductive polymer matrix according to claim 1, wherein said molecule having  
2 binding specificity for a target molecule is selected from the group consisting of Fc receptor,  
3 Protein G, and avidin or avidin-related molecules.

1           6. A method for isolating a target molecule from a sample, said method comprising  
2 contacting said sample with a conductive polymer matrix, wherein said conductive polymer  
3 matrix comprises a molecule having binding specificity for a target molecule; binding of said  
4 target molecule to said molecule having binding specificity for said target molecule; and  
5 releasing said molecule having binding specificity for said target molecule from said  
6 conductive polymer matrix.

1           7. A method for isolating a target cell from a sample comprising a mixture of cells,  
2 said method comprising contacting said mixture of cells with a conductive polymer matrix,

3 wherein said conductive polymer matrix comprises a molecule having binding specificity for  
4 a target molecule expressed on said target cell; binding of said target cell to said molecule  
5 having binding specificity for said target cell; and releasing said molecule having binding  
6 specificity for said target molecule from said conductive polymer matrix.

1 8. The method according to claim 7, wherein said method further comprises washing  
2 said polymer matrix to remove unbound material.

1 9. The method according to claim 7, wherein said conductive polymer matrix  
2 comprises an antibody.

1 10. The method according to claim 9, wherein said antibody is a monoclonal  
2 antibody.

1 11. The method according to claim 9, wherein said antibody binds to a CD34  
2 determinant.

1 12. The method according to claim 7, wherein said target cell is a stem cell.

1 13. The method according to claim 7, wherein said conductive polymer matrix is  
2 formed using enzyme generated means.